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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,206	11/17/2003	Hitoshi Yasuda	00862.002425.1	9571
5514 7590 12/13/2007 FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			EXAMINER DURNFORD GESZVAIN, DILLON	
			ART UNIT 2622	PAPER NUMBER
			MAIL DATE 12/13/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/713,206

Applicant(s)

YASUDA, HITOSHI

Examiner

Dillon Durnford-Geszvain

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-20,22-30 and 32-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-19,26-29 and 36 is/are allowed.
- 6) ☒ Claim(s) 1,3-15,20,22-24,30 and 32-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 12/9/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 12/9/2003 have been fully considered but they are not persuasive.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., continuing to focus when the light projector has turned off) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The claims call for inhibiting the movement of the optical system before the light projector is turned OFF when the focus control means completes adjusting during a time when the light projector is illuminating the object. Nowhere in the claim does it explicitly state that if the focus control is not completed during the time when the light projector is illuminating the object, then the movement of the optical system is continued after the light stops illuminating the object.

As to the Applicant's request that a reference be provided regarding the previously taken Official Notice, in the last Office Action sent regarding the parent of the present Application, the Examiner provided a reference that teaches a recording medium in an electronic camera (US 5,164,833, Aoki: cited on the IDS filed 12/9/2003).

Applicant further argues that there was no showing of motivation in the cited documents for making the combination. However, motivation need not come from the

cited references, MPEP 2143.01 states "there are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art."

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims **1**, **20** and **30** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claims all contain a limitation akin to "adjusting a position of [an] optical system to an in-focus position by **continuously moving** said optical system" (emphasis added). The Examiner cannot find support for this limitation in the specification as originally filed. In fact, the Examiner believes that it is impossible to perform the hill climbing operation described by the Applicant in the specification while also "continuously moving" the optical system. For example, in step S7 of Fig. 2 of the present application the control means checks to see if the apex is exceeded, if it is exceeded it **stops** the movement of the optical system and starts moving it in the opposite direction (see step S8). Therefore, the optical system cannot be said to be

"continuously moving," even if the control means were continuously driving the optical system.

Claims **3-15**, **22-25** and **32-35** are also rejected under 35 U.S.C. § 112, first paragraph because they depend from claims that contain new matter and therefore they also contain new matter.

Rejections on the merits will be made in light of the rejection of the claims under 35 U.S.C. § 112, first paragraph.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims **20** and **30** are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,448,331 (Hamada).

As to claim **20**, Hamada teaches a focus adjustment method having the focus adjustment control step of adjusting a position of an optical system (a lens, not shown) to an in-focus position by moving said optical system (not shown), which receives an image of an object illuminated by a light projector 4, in an optical axis direction of said optical system on the basis of an input video signal, comprising the step of:

controlling an ON/OFF state of said light projector 4 in accordance with a focus adjustment state of said optical system 4 and inhibiting a movement of said optical

system (not shown) before said light projector is turned OFF in a case that the (see Column 15 lines 50-58 and note that the movement of the lens is always inhibited after an in-focus state is achieved).

Claim **30** corresponds to claim **20** but is directed to a computer readable medium and therefore is rejected on the same grounds as claim **20** but directed to a computer readable medium.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims **1-** are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,448,331 (Hamada) in view of US 6,236,431 (Hirasawa '431).

As to claim **1**, Hamada teaches an automatic focus adjustment device comprising:

a light projector 4 for illuminating an object;
an optical system (lens, not shown) for receiving an image of the object illuminated by said light projector 4; and

focus adjustment control means (comprising 6 and 7) for adjusting a position of said optical system (not shown) to an in-focus position by moving said optical system in an optical axis direction on the basis of an input video signal (Column 3 lines 33-60);

and

control means 1 for controlling an ON/OFF state of said light projector in accordance with a focus adjustment state of said focus adjustment control means (6 and 7) and inhibiting a movement of said optical system (not shown) before said light projector is turned OFF in a case that said focus adjustment control means (6 and 7) completes the adjusting during a time when the light projector is illuminating the object (see Column 3 lines 33-60 and Column 15 lines 50-58 and note that the light projector 4 is turned on during only auto-focusing and movement of the optical system is inhibited after focusing is complete, therefore, movement of the optical system is inhibited if the focusing is completed while the object is illuminated by the light projector).

What Hamada does not teach is adjusting the focus based on a specific component of the video signal. However, Hirasawa '431 teaches a focus adjustment apparatus (see Fig. 6) that adjusts the focus state of an optical system 204 based on a specific component in a video signal (see Column 15 line 26 to Column 16 line 5). One of ordinary skill in the art would recognize the advantages of using the high frequency component of an image signal to adjust focus as this allows for the use of the imager for focus adjustment resulting in less parts and a smaller camera. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a specific component of the video signal for adjusting the focus of the apparatus of Hamada as this would allow for the apparatus of Hamada to be made smaller and lighter by eliminating the light detector 8.

As to claim **3**, see the rejection of claim **1** and note that Hamada in view of Hirasawa '431 further teaches that the specific component is a high-frequency component (see Column 15 line 26 to Column 16 line 5 of Hirasawa) and the apparatus of Hamada in view of Hirasawa '431 would also further teach that the position of the optical system is set so as to maximize the high frequency component (see Fig. 12).

As to claim **4**, see the rejection of claim **3** and note that Hamada does not show the lens arrangement of the optical system but does teach that a focusing lens is used (Column 12 lines 18-38). However, the optical system of Hirasawa '431 teaches a focus lens 204, and teaches that focus adjustment involves adjusting the position of the focusing lens (Column 15 line 26 to Column 16 line 5). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a focusing lens as is used in Hirasawa '431 in the apparatus of Hamada as this would allow for efficient focusing.

As to claim **22**, see the rejection of claim **20** and note that does not teach is adjusting the focus based on a specific component of the video signal. However, Hirasawa '431 teaches a focus adjustment apparatus (see Fig. 6) that adjusts the focus state of an optical system 204 based on the high frequency component in a video signal (see Column 15 line 26 to Column 16 line 5). One of ordinary skill in the art would recognize the advantages of using the high frequency component of an image signal to adjust focus as this allows for the use of the imager for focus adjustment resulting in

less parts and a smaller camera. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the high frequency component of the video signal for adjusting the focus of the apparatus of Hamada as this would allow for the apparatus of Hamada to be made smaller and lighter by eliminating the light detector 8.

Claim **32** corresponds to claim **22** but is directed to a computer readable medium and therefore is rejected on the same grounds as claim **22** but directed to a computer readable medium.

7. Claims **5** and **6** are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,448,331 (Hamada) in view of US 6,236,431 (Hirasawa '431) further in view of US 5,164,833 (Aoki).

As to claim **5**, see the rejection of claim **3** and note that Hamada does not show the components of the camera, however Hirasawa '431 teaches the components of a camera that adjusts focus including: imaging sensing means 214 for sensing an object image obtained via an optical system, and outputting a video signal (see Fig. 6). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use components such as those used in Hirasawa '431 as this would provide an effective means of implementing the functions of Hamada.

What neither Hamada nor Hirasawa explicitly teaches is a recording means for recording images of an object. However, Aoki teaches a recording medium 71 for

recording images (Column 4 lines 9-29 and Fig. 1). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have added a recording means such as that taught by Aoki as this would allow for the in-focus images produced by the apparatus taught by Hamada in view of Hirasawa to be recorded and not just taken and then immediately erased after they are processed.

As to claim 6, see the rejection of claim 5 and note that Hamada teaches exposing an imager after the in-focus state is achieved (see Fig. 10). However, Hamada does not explicitly teach storing the exposed image. However, as discussed in the rejection of claim 5 Aoki teaches a recording medium 71 for recording images (Column 4 lines 9-29 and Fig. 1). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have added a recording means such as that taught by Aoki as this would allow for the in-focus images produced by the apparatus taught by Hamada in view of Hirasawa to be recorded and not just taken and then immediately erased after they are processed.

8. Claims 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,448,331 (Hamada) in view of US 6,236,431 (Hirasawa '431) further in view of US 6,028,981 (Hirasawa '981).

As to claim 13, see the rejection of claim 3 and note that Hamada further teaches a first 4 and second 2 light projection units and focusing and zoom lenses (Column 3, lines 33-44 and Column 12 lines 18-38). However, Hamada does not teach storage

means for pre-storing information related to an offset amount of an in-focus position upon movement of the zoom lens, nor does it teach acquiring the offset amount from storage and using it to offset the focus lens.

However, Hirasawa '981 teaches a zoom lens 102 (see Fig. 3) and focus lens 103 with a focus control means that stores offset amounts corresponding to the position of the zoom lens 102 (Column 6 line 63 to Column 7 line 15, and Column 11 lines 51-65). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the apparatus of Hirasawa '981 with the combination of Hamda and Hirasawa '431 as this would allow for focus the lenses correctly in different lighting conditions (see Column 4 lines 6-36 of Hirasawa '981) like the first light projector of Hamada.

As to claim **14**, see the rejection of claim **13** and note that Hamada does not show the structure of the camera. However, as discussed above, Hirasawa '431 teaches image sensing means 214 for sensing an object image, but neither Hamada nor Hirasawa '431 teaches a recording means for recording an image. However, Hirasawa '981 teaches a recording means (129-131) for recording images. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have added a recording means such as that taught by Hirasawa '981 as this would allow for the in-focus images produced by the apparatus taught by Hamada in view of Hirasawa '431 to be recorded and not just taken and then immediately erased after they are processed.

As to claim **15**, see the rejection of claim **14** and note that Hamada teaches exposing an imager after the in-focus state is achieved (see Fig. 10). However, Hamada does not explicitly teach storing the exposed image. However, as discussed in the rejection of claim **14** Hirasawa '981 teaches a recording medium (129-131) for recording images (Column 4 lines 9-29 and Fig. 1). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have added a recording means such as that taught by Hirasawa '981 as this would allow for the in-focus images produced by the apparatus taught by Hamada in view of Hirasawa '431 to be recorded and not just taken and then immediately erased after they are processed.

Claim **25** corresponds to claim **13** but is a method instead of an apparatus and therefore is rejected on the same grounds as claim **13** but directed to a method.

Claim **35** corresponds to claim **25** but is directed to a computer readable medium and therefore is rejected on the same grounds as claim **25** but directed to a computer readable medium

Allowable Subject Matter

9. Claims **16-19**, **26-29** and **36** are allowed.

10. The following is a statement of reasons for the indication of allowable subject matter: the cited prior art neither anticipates nor renders obvious the claimed limitation

of setting the ON period of a light projector at an integer multiple of a vertical synch period of the input video signal.

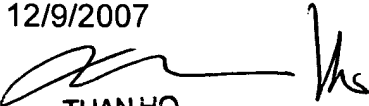
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dillon Durnford-Geszvain whose telephone number is (571) 272-2829. The examiner can normally be reached on Monday through Friday 8 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on (571) 272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dillon Durnford-Geszvain

12/9/2007

TUAN HO
PRIMARY EXAMINER